

## CLAIMS:

1. A method of embedding auxiliary data in a host signal, comprising the steps of:  
using a data embedding method having an embedding rate and distortion to produce a composite signal;
  - 5 – using a first portion of said embedding rate to accommodate restoration data for restoring the host signal and a second portion of said embedding rate for embedding said auxiliary data;
  - characterized in that the method comprises the step of using a third portion of said embedding rate for embedding error correcting data to correct errors in said restoration data and/or auxiliary data.
2. A method of embedding auxiliary data in a host signal, comprising the steps of:
  - segmenting the host signal;
  - 15 – using a predetermined data embedding method having a given embedding rate and distortion for embedding data in a host signal segment, to produce a respective composite signal segment;
  - determining restoration data identifying the host signal segment conditioned on the composite signal segment; and
  - 20 – embedding said restoration data in a subsequent host signal segment using a portion of the embedding rate;

characterized in that the method further comprises the step of:

  - generating error correction data for correcting errors in the composite signal segment;
  - embedding said error correction data in the subsequent host signal segment using a further portion of the embedding rate; and
  - 25 – embedding auxiliary data in a host signal segment using the remaining portion of the embedding rate.

3. A method as claimed in claim 2, wherein each segment comprises the restoration data and error correction data for a previous segment as well as auxiliary data.

4. A method as claimed in claim 3, wherein the segments have equal lengths.

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5. A method as claimed in claim 2, comprising the steps of:

- (a) embedding auxiliary data only in a first host signal segment having a given length;
- (b) embedding, in a subsequent segment, the restoration data and error correction data for the previous segment;
- (c) adapting the length of said subsequent segment to the amount of said restoration data and error correction data; and
- (d) repeating steps (b) and (c) until the length of the subsequent segment is smaller than a given threshold.

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6. An arrangement for embedding auxiliary data in a host signal, comprising:

- segmentation means for segmenting the host signal;
- a predetermined data embedder having a given embedding rate and distortion for embedding data in a host signal segment, to produce a respective composite signal segment;
- means for determining restoration data identifying the host signal segment conditioned on the composite signal segment; and
- the data embedder being arranged to embed said restoration data in a subsequent host signal segment using a portion of the embedding rate;

25 characterized in that the arrangement further comprises means for generating error correction data for correcting errors in the composite signal segment, the data embedder further being arranged to embed said error correction data in the subsequent host signal segment using a further portion of the embedding rate, and to embed auxiliary data in a host signal segment using the remaining portion of the embedding rate.

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7. A method of reconstructing a host signal from a composite signal produced by a method as claimed in one of claims 2-5, comprising the steps of:

- segmenting said composite signal;
- retrieving from a composite signal segment the error correction data embedded therein;

- using said error correction data to correct errors in a previous composite signal segment;
- retrieving from the composite signal segment restoration data embedded therein; and
- using said restoration data to reconstruct the previous host signal segment given the previous composite signal segment.

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8. An arrangement for reconstructing a host signal from a composite signal produced by a method as claimed in one of claims 2-5, comprising:

- segmentation means for segmenting said composite signal;
- means for retrieving from a composite signal segment the error correction data embedded therein;
- error correction means for correcting errors in a previous composite signal segment using said error correction data;
- means for retrieving from the composite signal segment restoration data embedded therein; and
- 15 – reconstructing the previous host signal segment given the previous composite signal segment, using said restoration data.

9. A composite information signal in the form of segments with embedded data, the data embedded in a composition signal segment comprising restoration data identifying a previous host signal segment conditioned on the corresponding previous composite signal segment, and further comprising error correction data for correcting errors in said previous composite signal segment.